



Medicaid Value Management (MVM)

Realizing the fiscal value of quality care.

November 2012

Prevention Quality Indicators (PQIs)

1st Qtr, SFY 13

Special points of interest:

- Iowa Medicaid has doubled the rate for Diabetes Short-term Complications (PQI 1) since 2009.

History

Each year since 2007, the Medicaid Value Management program has utilized quality measures developed by the Agency for Healthcare Research and Quality (AHRQ) to evaluate the alignment of outpatient care received by Iowa's adult Medicaid members with best practice standards.

AHRQ's Preventive Quality Indicators (PQIs) are ambulatory care sensitive conditions that can be identified

through hospital admissions.

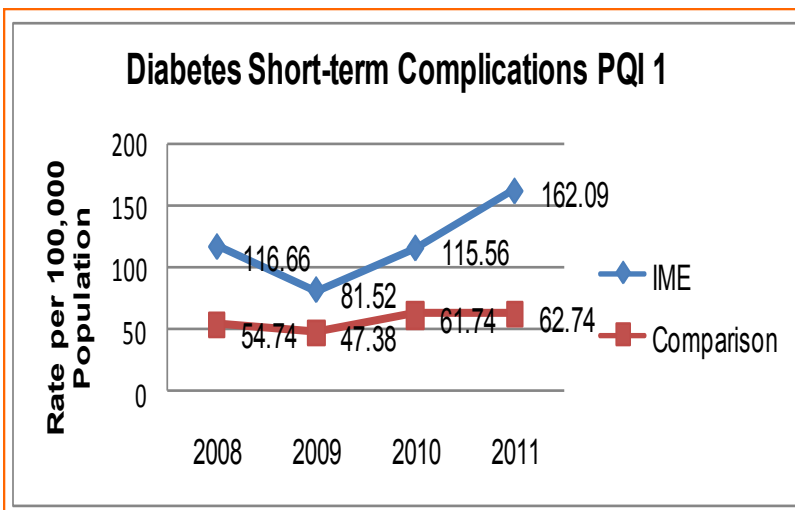
They provide insight regarding outpatient care that could have prevented the hospitalization. Analysis of Iowa Medicaid data compared to PQI bench-

marks helps identify opportunities to intervene in healthcare management of acute illness and chronic conditions.

AHRQ software was utilized for analysis of IME's hospital claims for calendar year 2011 to determine Iowa Medicaid's score on each measure. Claims for members dually eligible for Medicare and Medicaid were excluded.

PQI 1—Diabetes Short Term Complications Admission Rate:

Complications include ketoacidosis, hyperosmolarity and coma. These life-threatening emergencies may arise from the imbalance of glucose and insulin resulting from misadministration of insulin, failure to follow a proper diet, errors in taking insulin or simply not taking it.

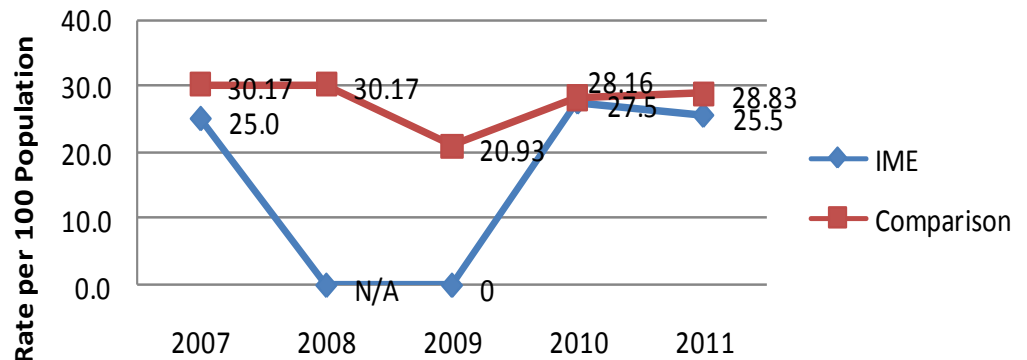


Analysis of PQI 1—Diabetes Short Term Complications Admission Rate:

Despite efforts at management of the chronic condition of diabetes, Iowa Medicaid has always exceeded the national benchmark in this measure. The rate of hospitalizations from diabetes related conditions is on the rise. Results are provided to IME's Member Services for use in combating this problem.

PQI 2—Perforated Appendix: Perforated appendix may occur when appropriate treatment for acute appendicitis is delayed due to lack of access to care or patient or practitioner failure to interpret symptoms as important.

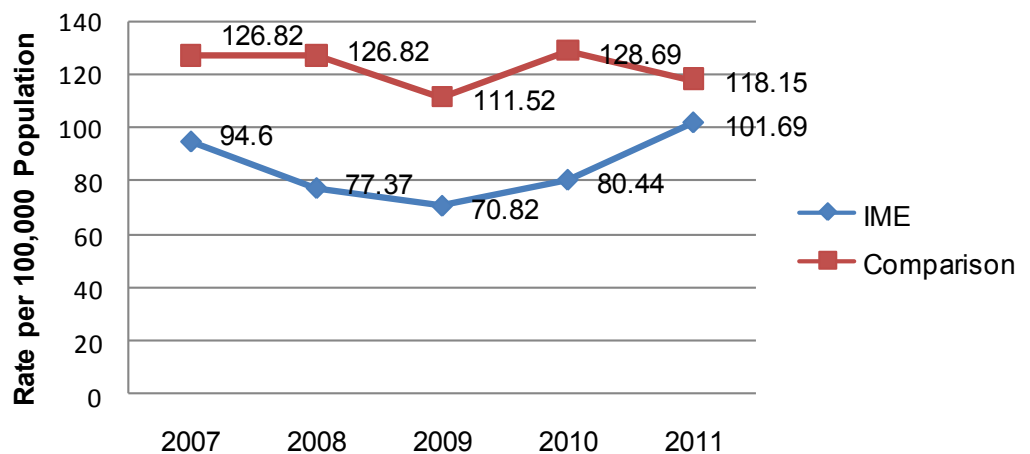
Perforated Appendix PQI 2



Analysis of PQI 2—Perforated Appendix: Iowa Medicaid's results and the national benchmark are both within the 95 percent confidence interval indicating similar scores.

PQI 3—Diabetes Long-term Complications Admission Rate: Complications include renal, eye, neurological and circulatory disorders and occur at some time in the majority of patients with diabetes to some degree. They are thought to arise from sustained long-term poor control of diabetes and are best prevented by adherence to therapy and consistent monitoring.

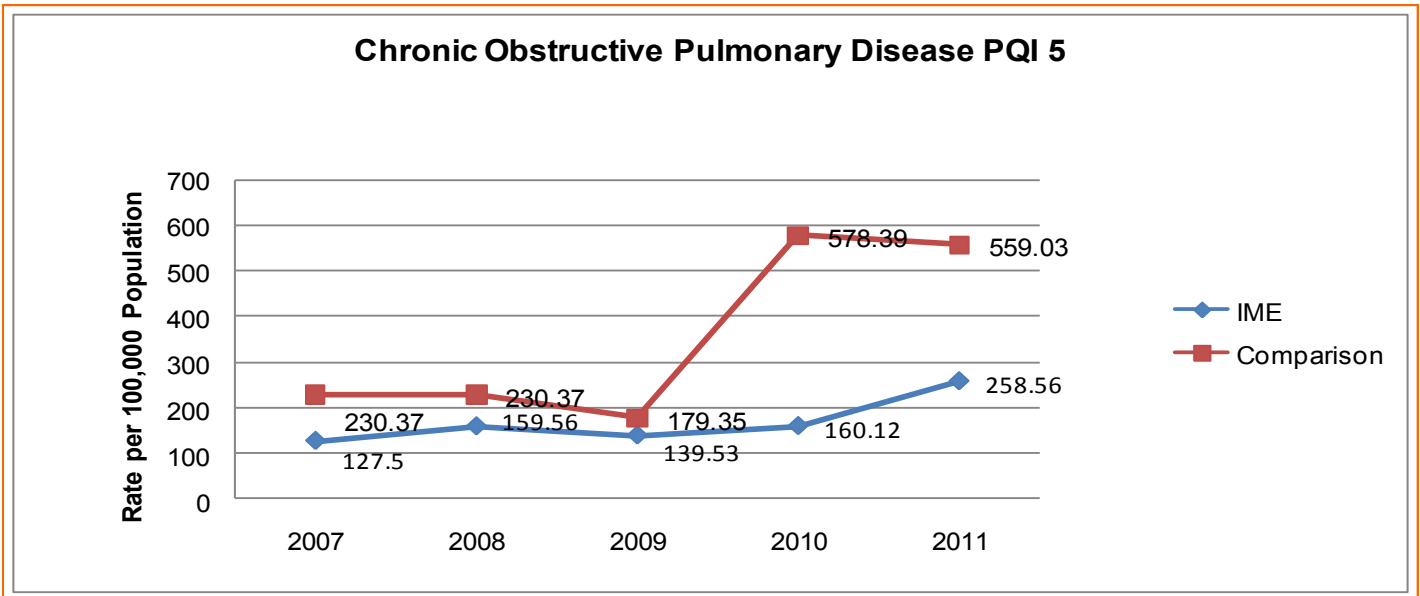
Diabetes Long-term Complications PQI 3



Long-term complications of diabetes are serious and costly health care concerns.

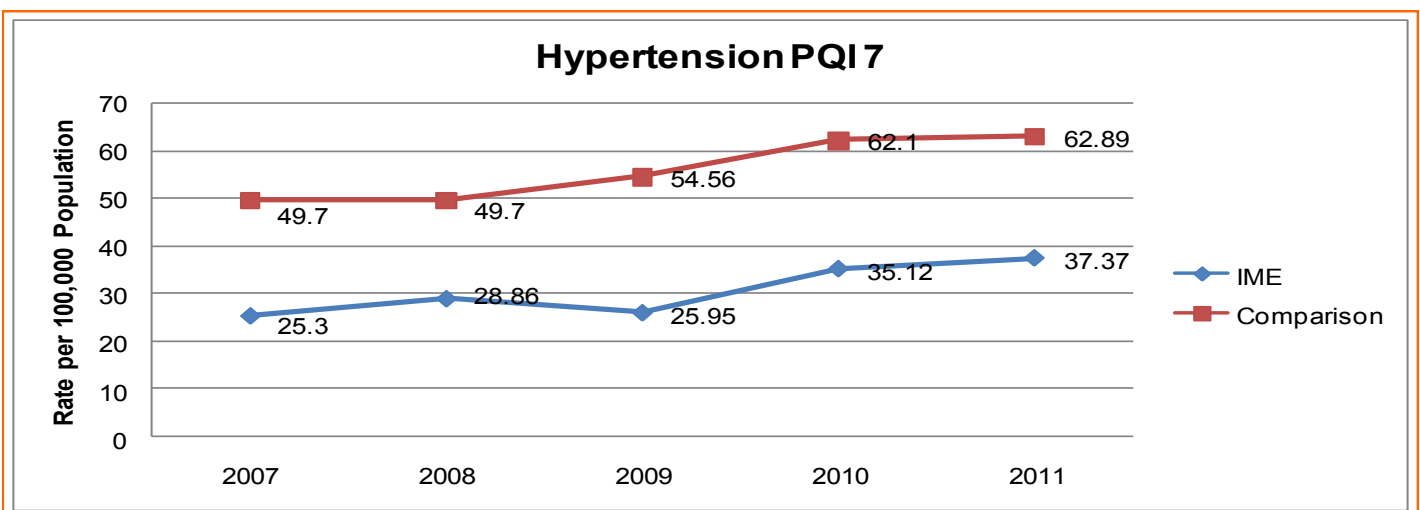
Analysis of PQI 3—Diabetes Long-term Complications Admission Rate: While IME struggles with short-term complications arising from diabetes, Iowa data has always been below the national benchmark with regard to long-term complications. Iowa Medicaid's trend, however, displays an increase in hospitalizations related to diabetes that could be avoided.

PQI 5—Chronic Obstructive Pulmonary Disease (COPD) Admission Rate: Comprised of three diseases causing respiratory dysfunction (asthma, emphysema, chronic bronchitis), COPD is characterized by sudden worsening symptoms caused by infection and intensified by smoking.



Analysis of PQI 5—Chronic Obstructive Pulmonary Disease (COPD) Admission Rate: The national benchmark has experienced a recent climb while Iowa Medicaid has consistently scored below the benchmark in this measure. IME's data, however, indicates an upward trend in hospitalizations related to COPD. The increase may be influenced by an increase in detection.

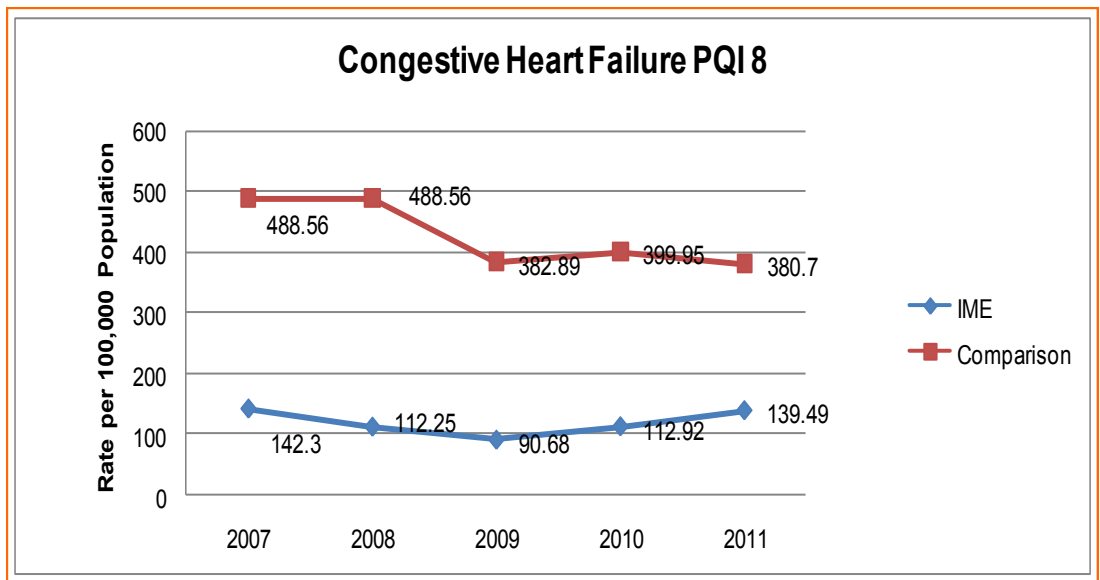
PQI 7—Hypertension Admission Rate: Hypertension is a chronic condition of elevated blood pressure that seldom requires hospitalization.



Analysis of PQI 7—Hypertension Admission Rate: Both Iowa Medicaid and the national benchmark demonstrate increasing trends in hospitalization related to high blood pressure. National concerns related to obesity contribute to this measure's outcomes.

PQI 8—Congestive Heart Failure (CHF) Admission Rate: CHF is a chronic progressive disorder and hospital admissions can be caused by lack of patient compliance, problems accessing care or poor quality care.

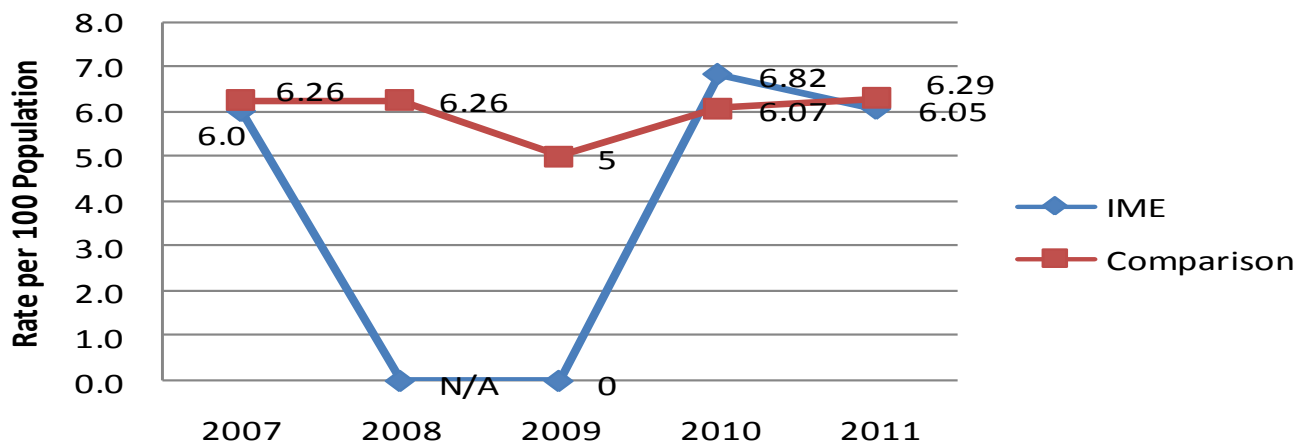
Low birth weight concern has attracted attention from multiple stakeholders in Iowa.



Analysis of PQI 8—Congestive Heart Failure (CHF) Admission Rate: Despite having been below the national benchmark in all years of analysis, Iowa Medicaid's trend indicates increasing hospitalizations related to CHF similar to results obtained related to other chronic conditions.

PQI 9—Low Birth Weight: This concern may occur due to inadequate intrauterine growth or premature birth. Risk factors include low income and tobacco use during pregnancy. IME and the Iowa Department of Public Health (IDPH) along with March of Dimes representatives have established a Maternal Health Task Force to address this concern in Iowa. On March 8, 2012, IME released an informational letter to physicians and clinics announcing IME's Maternal Management program that assists high risk Medicaid maternity members in achieving the healthiest possible birth outcomes.

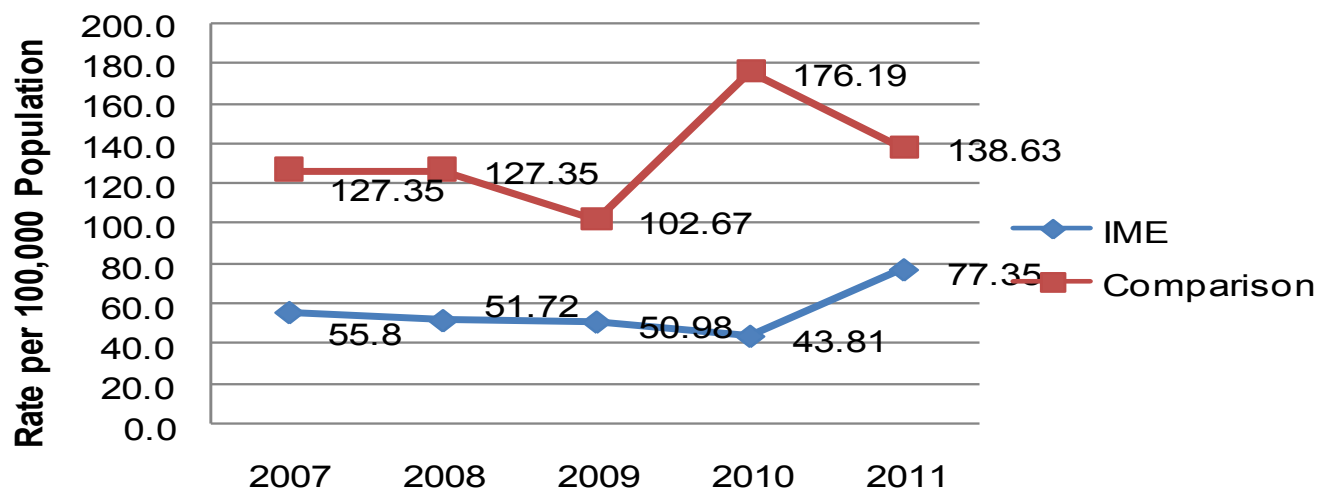
Low Birth Weight PQI 9



Analysis of PQI 9—Low Birth Weight: In 2010 Iowa Medicaid's outcome on this important measure was above the national benchmark and now is indiscernible as the benchmark falls within the 95 percent confidence interval. Interventions described above appear to be having a positive outcome.

PQI 10—Dehydration Admission Rate: Dehydration is a serious acute condition that occurs in frail patients and patients with underlying illnesses following insufficient attention and support for fluid intake. It is potentially fatal for the elderly, young children, frail patients and patients with serious co-morbid conditions.

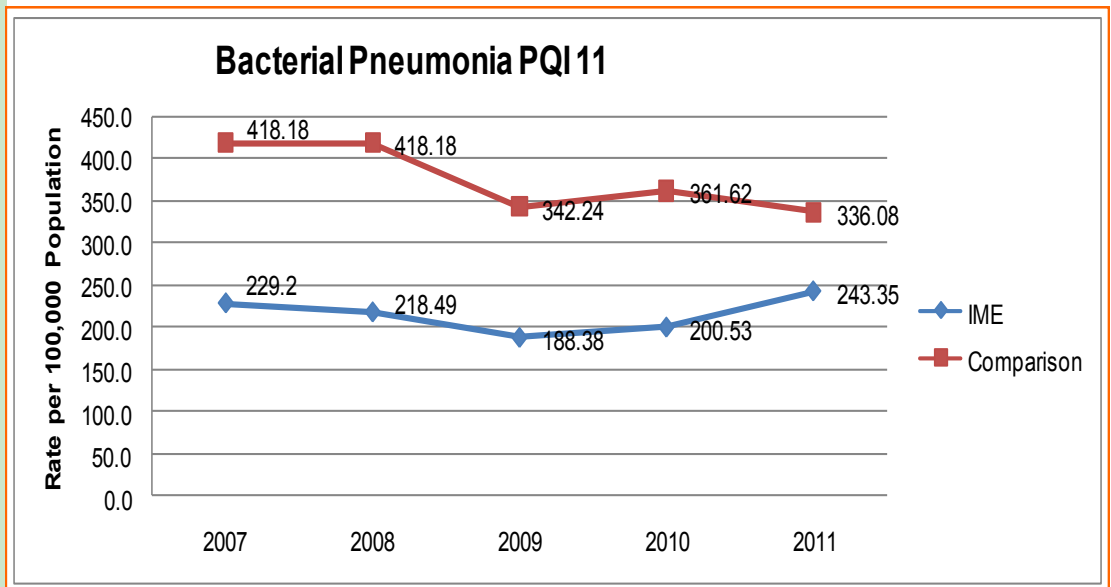
Dehydration PQI 10



PQI measures related to acute conditions indicate increased hospitalization rates.

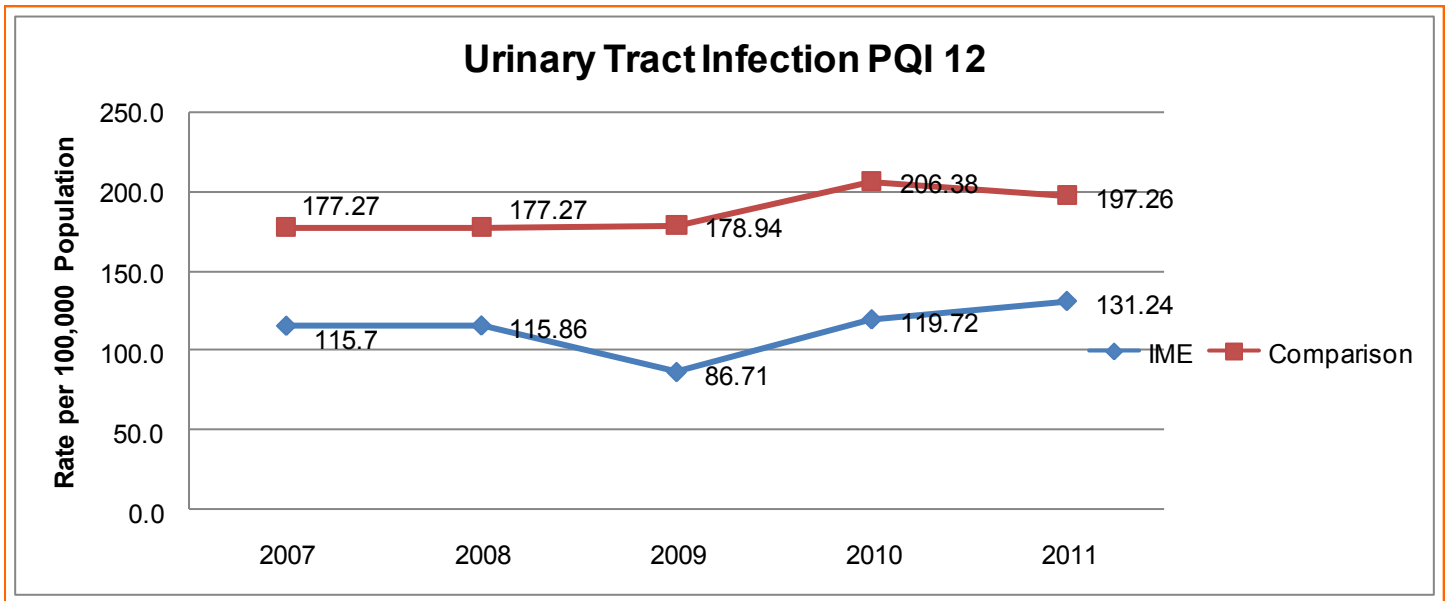
Analysis of PQI 10—Dehydration Admission Rate: Despite experiencing an increase while the national benchmark declined, Iowa Medicaid's hospitalization rate for dehydration remains below the comparison rate.

PQI 11—Bacterial Pneumonia Admission Rate: Bacterial pneumonia is a relatively common acute condition, but left untreated can lead to death, particularly among the elderly. Vaccination for pneumococcal pneumonia for the elderly and early management of bacterial respiratory infections can reduce admissions.



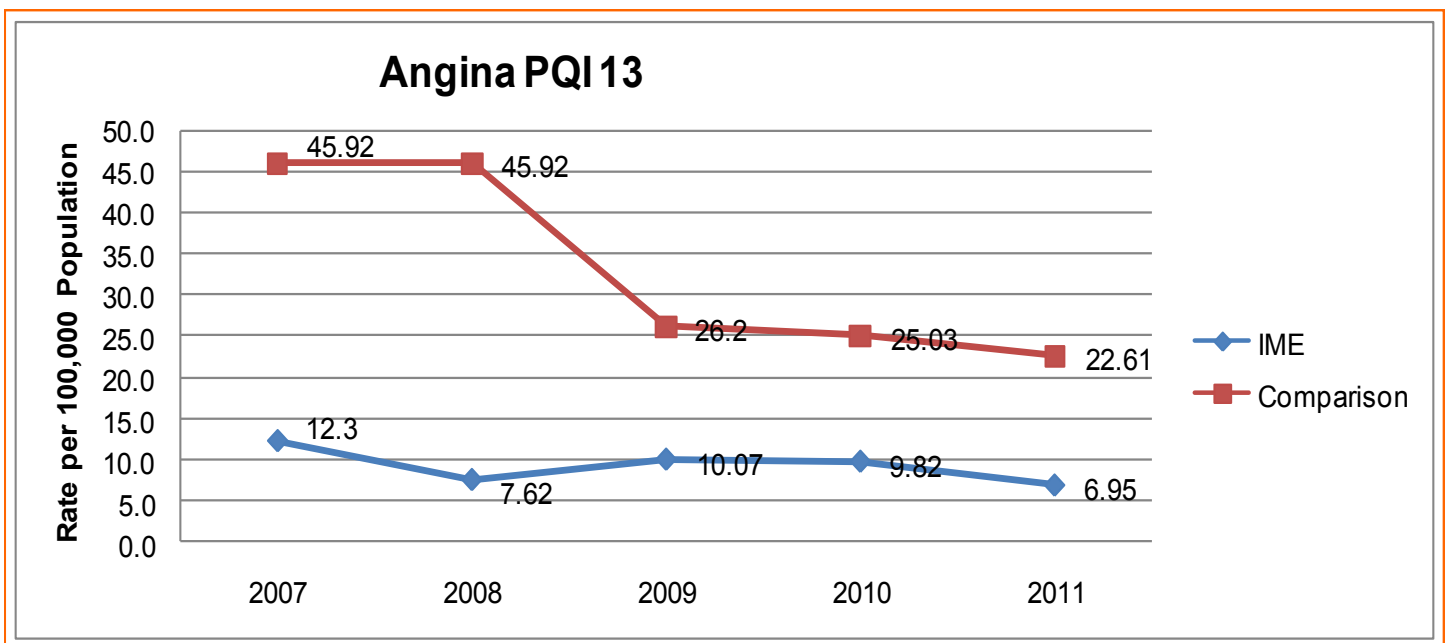
Analysis of PQI 11—Bacterial Pneumonia Admission Rate: Iowa Medicaid data for five years has demonstrated outcomes below the national benchmarks related to pneumonia related hospitalizations. As with other measures this year, Iowa's hospitalization rates are on the rise. Over 500 members were hospitalized with bacterial pneumonia.

PQI 12—Urinary Tract Infection Admission Rate: This is a common condition that can progress to clinically significant infections in vulnerable individuals with inadequate treatment.



Analysis of PQI 12—Urinary Tract Infection Admission Rate: Over 300 members were hospitalized related to a urinary tract infection. Iowa's outcome on this measure remains below the national benchmark but illustrates an increase in hospitalizations since 2009.

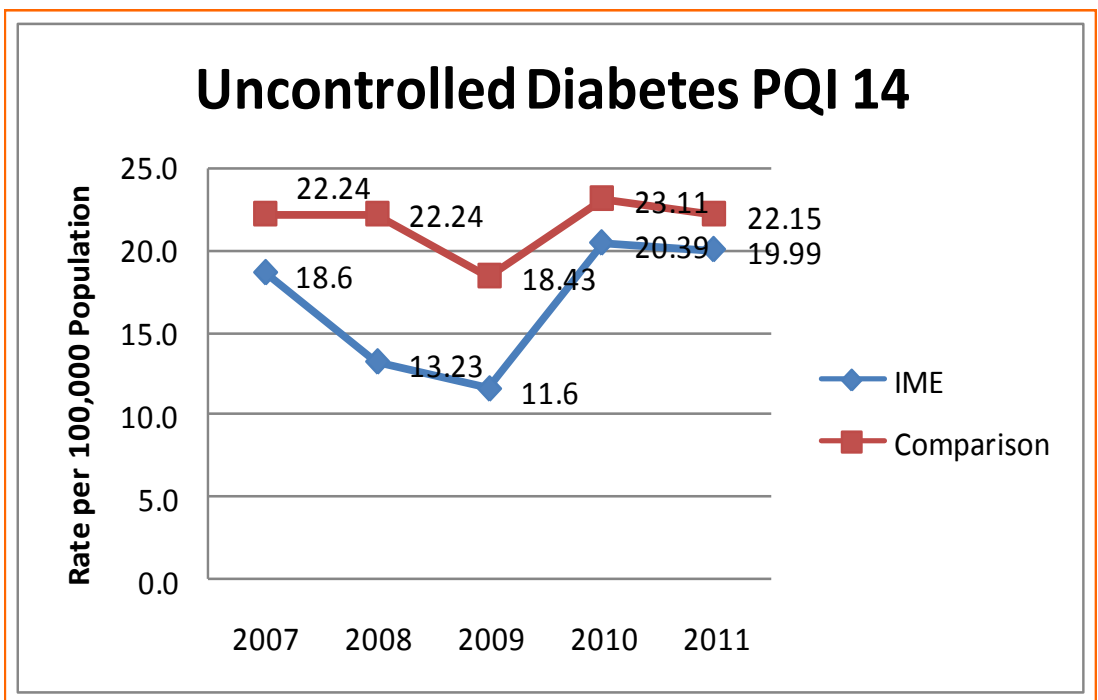
PQI 13—Angina without Procedure Admission Rate: Angina is a symptom of potential coronary artery disease. Effective management of coronary artery disease reduces occurrence of heart attacks and angina related admissions. Risk factors are smoking, hyperlipidemia, hypertension and elderly age.



Analysis of PQI 13 Angina without Procedure Admission Rate: Both the national benchmark and Iowa Medicaid's hospitalization rates related to angina have decreased since 2009. IME's decrease, however, is at a slightly faster rate.

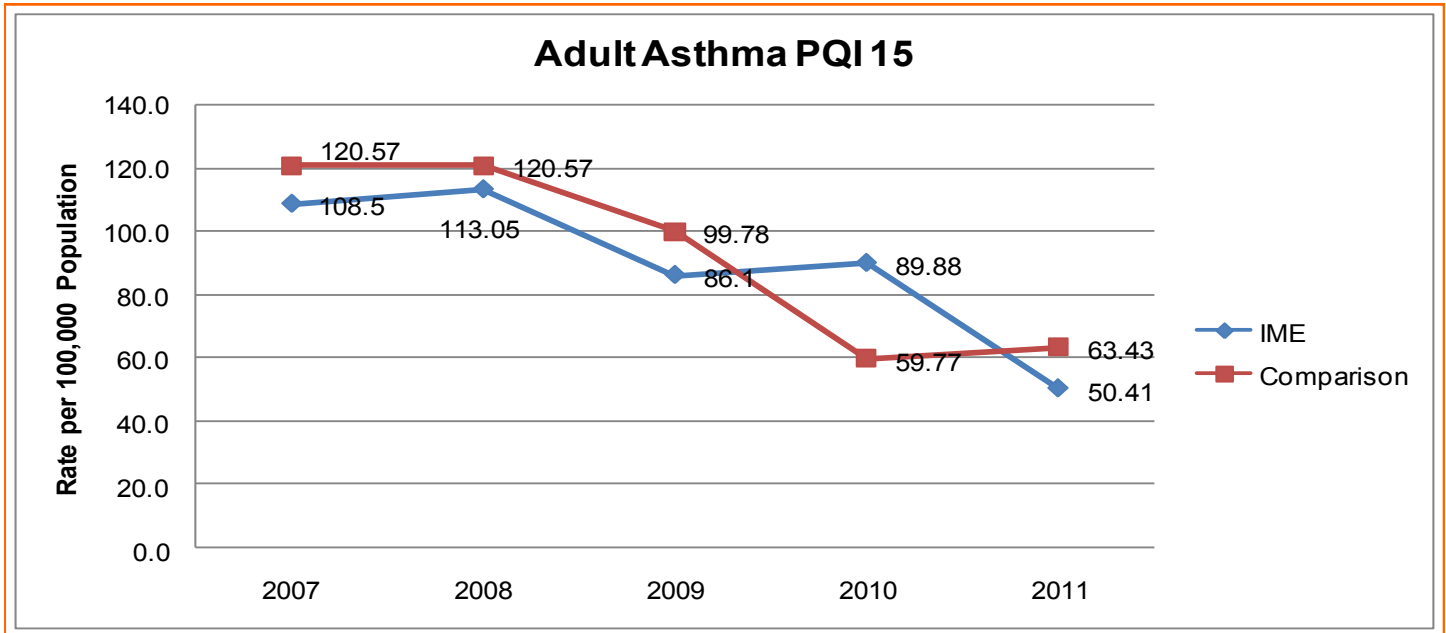
PQI 14—Uncontrolled Diabetes Admission Rate: This measure should be used in conjunction with short-term complications of diabetes. Diabetic emergencies are potentially life-threatening and include ketoacidosis, hyperosmolarity and coma.

Despite an outcome of being lower than the national benchmark, hospitalization for diabetes remains a concern.



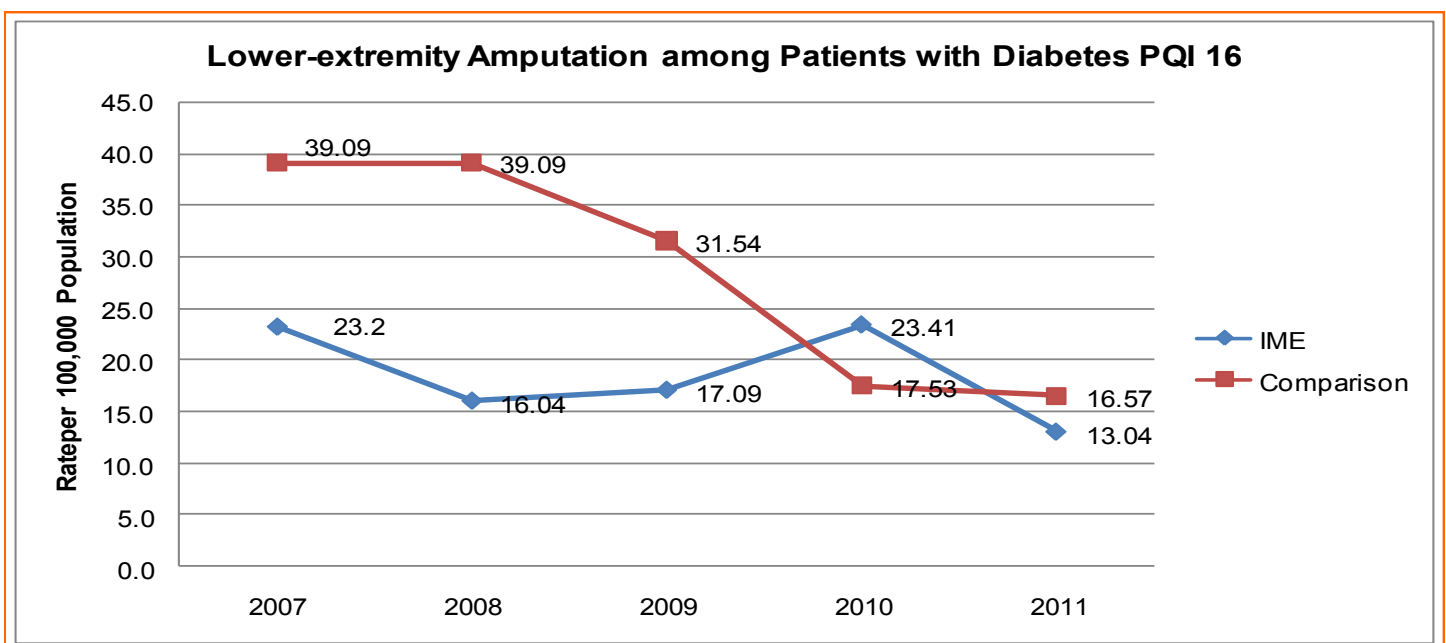
Analysis of PQI 14—Uncontrolled Diabetes Admission Rate: A sharp increase was evident in the 2010 outcome for this measure and has decreased slightly in 2011. IME's rate remains somewhat parallel to the benchmark rate and without relative difference due the benchmark falling within the confidence interval.

PQI 15—Adult Asthma Admission Rate: Asthma is one of the most common reasons for hospital admission and emergency room care. Environmental factors may have an impact as well as inadequate access to care.



Analysis of PQI 15—Adult Asthma Admission Rate: Both the national benchmark and Iowa Medicaid's rates have experienced significant downward trends since 2007. IME's rate has dropped below the comparison value with 116 members hospitalized due to asthma concerns.

PQI 16—Rate of Lower-extremity Amputation among Patients with Diabetes: The need for lower-extremity amputation can be brought about by foot trauma, infection, neuropathy and microvascular disease. Interventions include glucose control, education, and foot care.

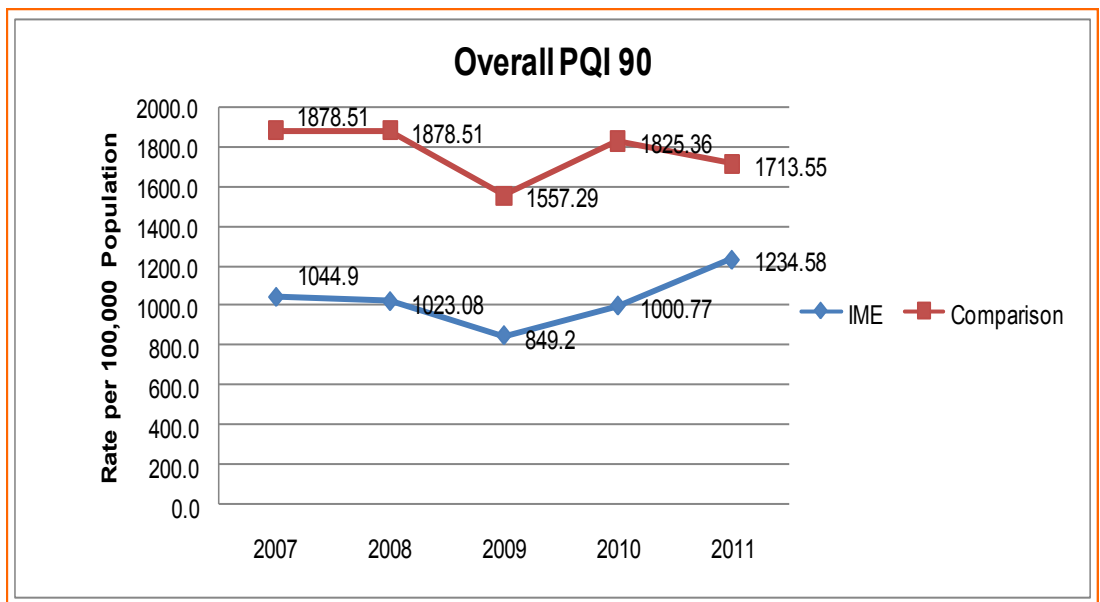


IME's overall score for Preventive Quality Indicators is below the national benchmark but is also on the rise.

Analysis of PQI 16—Rate of Lower-extremity Amputation among Patients with Diabetes: This important measure has also experienced downward trends for both Iowa Medicaid and the national benchmark since 2007 with the national decrease exceeding Iowa's decrease. With the comparison rate falling within the confidence interval, outcomes for 2011 could be considered to be identical.

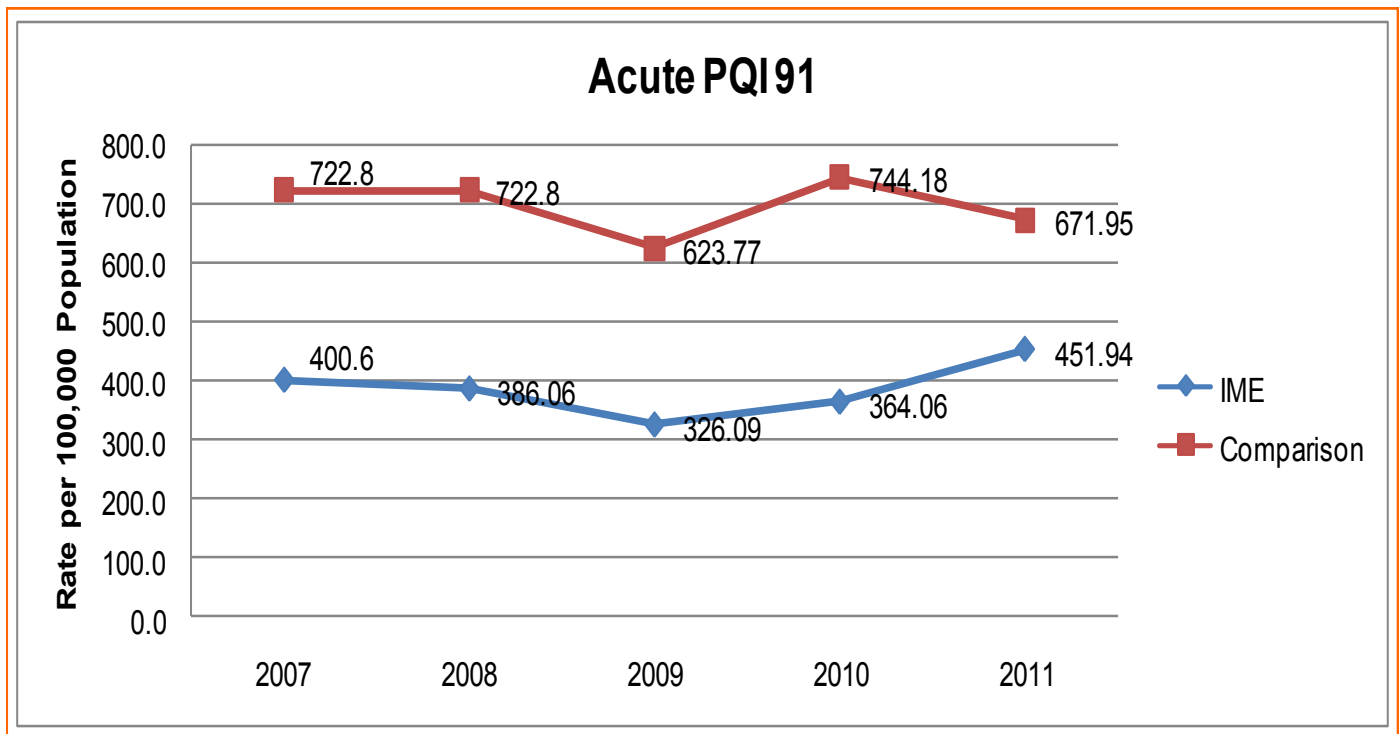
Composite Measures—Composite measures have been constructed for overall, acute and chronic conditions. They help summarize quality across multiple indicators and help identify drivers of quality.

PQI 90—Overall Composite Measure: The numerators of all the measures except PQI 2 (Perforated Appendix) and PQI 9 (Low Birth Rate) were combined to obtain an overall score for IME. Those two measures were excluded as their denominators were different.



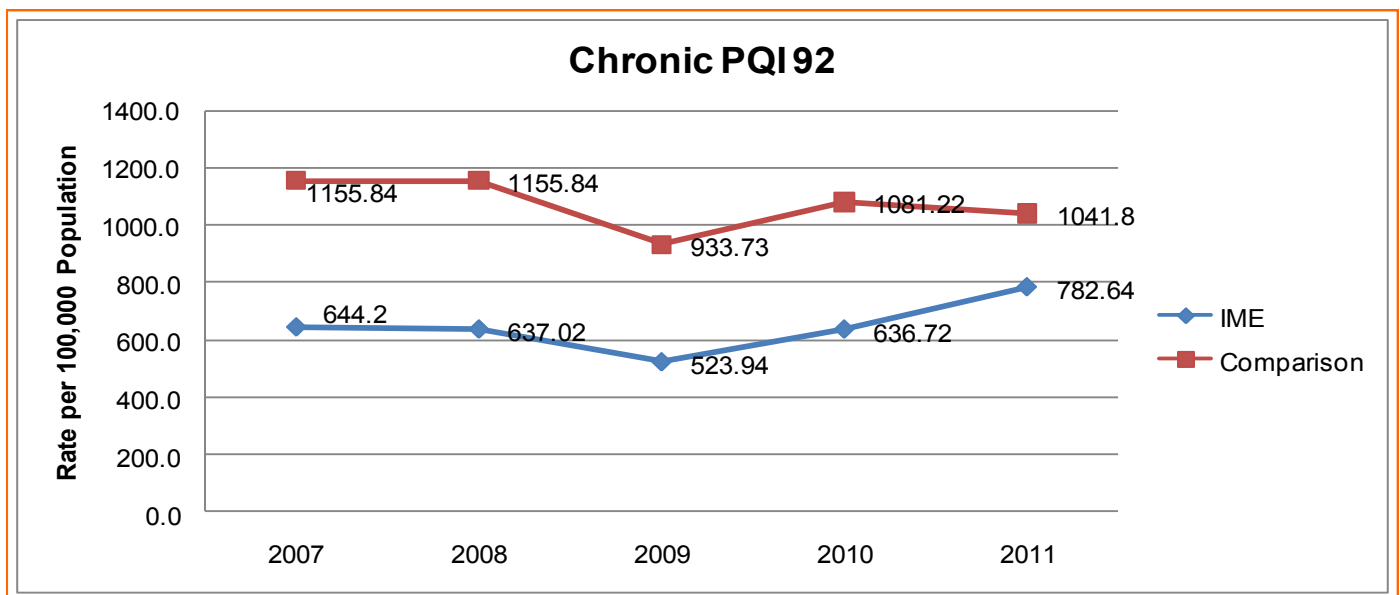
Analysis of PQI 90—Overall Composite Measure: With increases in hospitalizations in the past two years in 9 of the 14 measures, it is not surprising to see IME's steady increase in the composite score representing preventable hospitalizations. While remaining below the national benchmark, the data represents 2,841 hospitalizations with opportunity for prevention with quality outpatient care.

PQI 91—Acute Composite: The acute-only composite includes three PQI conditions: Dehydration (PQI 10), Bacterial Pneumonia (PQI 11) and Urinary Tract infection (PQI 12) to provide a picture of outpatient care for these acute conditions.



Analysis of PQI 91—Acute Composite: All three areas making up the Acute Composite experienced increased rates of hospitalization. Over one thousand members were hospitalized for conditions related to dehydration, bacterial pneumonia or urinary tract infection.

PQI 92—Chronic Composite: The chronic-only composite includes nine indicators that measure chronic conditions: Diabetes (PQI 1, 3, 14 and 16), COPD (PQI 5), Hypertension (PQI 7), CHF (PQI 8), Angina (PQI 13) and Asthma (PQI 15). The combination of these nine measures presents an overall score for outpatient care for typical chronic conditions.



Analysis of PQI 92—Chronic Composite: Six of the nine measures making up the composite measure relating to chronic conditions evidenced increased hospitalizations in the past two years contributing to an upward trend for this measure. The four measures related to diabetes demonstrated mixed results with two showing increases in hospitalization rate, one decrease and one with an increase in 2010 and leveling in 2011. The only two areas with outcomes of decreased hospitalizations were concerns related to angina and asthma. Eighteen hundred members experienced potentially preventable hospitalizations as a result of chronic conditions compared to 1,686 members in 2010.

Summary of PQI Results—Five Years of Data Benefits IME

The primary set of quality benchmarks used by Iowa Medicaid to evaluate the quality of outpatient care provided to members is AHRQ's module of **Preventive Quality Measures**. IME has now benefitted from five years of trending data to identify opportunities to improve outpatient care using the **PQIs**.

Iowa Medicaid, more often than not, has been below the comparative values of national benchmarks. Hospitalizations due to short term complications related to diabetes have been a concern each year although a significant decrease was noted in 2009. Other concerns have arisen at times related to perforated appendix and low birth rate.

While it's good to compare oneself to a benchmark, it is also good to compete with past performance and strive to improve.

Analysis of Iowa Medicaid's 2011 results include:

- **PQI 1—Diabetes Short Term Complications Admission Rate** continues to demonstrate outcomes significantly higher than national benchmarks with significantly increasing trends the past two years.
- **Two-year trends of increases** in potentially preventable hospitalizations were evidenced in 8 of the 14 measures.
- **Acute conditions increased hospitalizations** in all three acute measures.
- **Chronic conditions increased hospitalizations** in 6 of the 9 related measures.

A **summary** table of the **PQI 2012** outcomes follows (**page 14**).

Recommendations

- **Develop and disseminate educational materials** for providers addressing the diabetic related benefits available through Medicaid—including but not limited to Glycosylated A1C testing, diabetic education and IME's disease management program.
- **Implement a process** of identifying members with a diabetes diagnosis, cross check for enrollment in MediPASS or a Health Home and follow up with required enrollment to ensure identified members have a primary care physician managing care.
- **Monitor results in the population served by Health Homes** to identify impact on the PQI measures.

IME's Health Home initiative was implemented July 1, 2012. With incentives for physicians to utilize quality measures and be rewarded for positive outcomes, IME may see a reverse in current trends as the quality of outpatient care increases.

- **Monitor results in the population served by ACOs and/or MCOs** to identify impact on the PQI measures.
- **Follow progress of the Hospital Engagement Network (HEN)** which is currently targeting some of the PQI measures.
- **Share PQI data with outside groups such as the HEN, the Iowa Hospital Coalition (IHC) and Iowa Medical Society (IMS)** as well as provider groups who have expressed interest in improving healthcare quality in Iowa.
- **Compare IME's care management programs** in CY12 and CY13.
- **Evaluate options to more effectively utilize technology** in managing member's chronic conditions.

Use of telemedicine may be beneficial in helping members identify symptoms of an exacerbation in a chronic medical condition.

IME's Health Home initiative currently serving 11,000 members has potential to improve the quality of outpatient care for Medicaid members.

PQI Indicators

	<i>PQI Indicator</i>	<i>IME Numerator</i>	<i>IME Denominator</i>	<i>IME Rate 100000</i>	<i>95% CI IME Indicator</i>	<i>Observed Rate Per 100000</i>
# 1	Diabetes Short Term Complications	373	230119	162.09	145.44 - 178.74	62.741
# 2	Perforated Appendix	36	141	25.5 (per 100)	17.9 -33.08	28.83
# 3	Diabetes Long Term Complications	234	230119	101.69	88.45 - 114.93	118.15
# 5	COPD	595	230119	258.56	237.60 - 279.53	559.03
# 7	Hypertension	86	230119	37.37	29.26 - 45.49	62.89
# 8	Congestive Heart Failure	321	230119	139.49	124.03 - 154.96	380.70
# 9	Low Birth Rate	1031	17038	6.05 (per 100)	5.69 - 6.41	6.29
# 10	Dehydration	178	230119	77.35	65.77 - 88.93	138.63
# 11	Bacterial Pneumonia	560	230119	243.35	223 -263.70	336.08
#12	Urinary Tract Infection	302	230119	131.24	116.23 - 146.25	197.26
# 13	Angina	16	230119	6.95	3.33 –10.58	22.61
# 14	Diabetes Uncontrolled	46	230119	19.99	14 –25.98	22.15
# 15	Adult Asthma	116	230119	50.41	41.02 – 59.80	63.43
# 16	Lower Extremity Amputation	30	230119	13.04	8.15 –17.92	16.57
	<i>Area Indicator</i>	<i>IME Numerator</i>	<i>IME Denominator</i>	<i>IME Rate 100000</i>	<i>95% CI IME Indicator</i>	<i>Expected Rate Per 100</i>
# 90	Overall PQI	2841	230119	1234.58	1189.24 – 1279.91	1713.55
#91	Acute PQI	1040	230119	451.94	424.32 – 479.56	671.95
#92	Chronic PQI	1801	230119	782.64	746.42 – 818.86	1041.80

Medicaid Value Management (MVM)

Iowa Medicaid Enterprise
100 Army Post Road
Des Moines, Iowa 50315
Phone: 877-446-3787
Fax: 515-725-1354

Realizing the fiscal value of
quality care.

Medicaid Value Management (MVM) analyzes different areas of Iowa Medicaid to gain an understanding of the quality of the services provided to the Medicaid member. MVM analyzes the efficacy of services provided; best practices used and not used in Iowa and the over-all impact on our Medicaid population; MVM also looks at individual programs within Iowa Medicaid. Ultimately MVM looks for ways to promote improved health outcomes within the constraints of Medicaid budget limits and with this information, MVM makes recommendations for policy and program changes.

Query Facts:

Technical specifications provided by the Agency for Healthcare Research and Quality (AHRQ).